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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,621	02/12/2004	Tomonori Imamura	118631	3958

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1745

MAIL DATE	DELIVERY MODE
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06/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/776,621	Applicant(s) IMAMURA ET AL.	
	Examiner Jonathan S. Crepeau	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 10,11 and 21-23 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-3,6,12,13,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4,5,7-9,14,15 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species (i) in the reply filed on April 20, 2007 is acknowledged. The traversal is on the ground(s) that search an examination can be made of all species without a serious burden. This is not found persuasive because there is an examination and search burden for these species due to their mutually exclusive characteristics. The species require a different field of search (e.g., employing different search queries) and require consideration of different prior art references.

The requirement is still deemed proper and is therefore made FINAL. Claims 10, 11, and 21-23 are withdrawn from consideration herein.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites "A fuel cell system as claimed in claim 1, comprising an electrical energy storage device." However, it is unclear if the claimed electrical energy storage device is the "controllable electric power source" of claim 1. For examination purposes herein, the

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limitation has been interpreted as further limiting the controllable electric power source.

Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002-246053. The reference is directed to a fuel cell system wherein a controllable electric power source (battery 12) is either charged by the fuel cell or discharged to supplement fuel cell output, corresponding to the claimed “first” and “second” conditions (see claim 4 of the reference). Moisture diagnosis means (24, 34) are used to detect a remaining amount of water in the fuel cell, and the current output of the fuel cell is controlled accordingly (see abstract).

Thus, the instant claims are anticipated.

6. Claims 1-3, 6, 12, 13, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002-110211. The reference is directed to a fuel cell system wherein a controllable

electric power source (battery 5) is either charged by the fuel cell or discharged to supplement fuel cell output, corresponding to the claimed “first” and “second” conditions (see [0035]).

Moisture diagnosis means (voltage and temperature sensors 21, 22) are used to detect a flooded condition of the fuel cell (see abstract). When the moisture content is judged to be too high, the fuel cell power output (i.e., the fuel cell current) is reduced in a pulse-like manner to remove the excess water (see [0063]).

Thus, the instant claims are anticipated.

Allowable Subject Matter

7. Claims 19 and 20 are allowed.
8. Claims 4, 5, 7, 8, 9, 14, 15, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:

Independent claim 19 and dependent claims 4 and 14 each recite that a control means applies control to increase the value of the electric current generated by the fuel cell when the moisture content value is found to be below a predetermined lower limit. The above-applied references do not teach or fairly suggest this configuration. JP 2002-110211 is concerned with flooding of the fuel cell, but makes no provision for a condition in which the fuel cell is too dry (i.e., having too low a moisture content). JP 2002-246053 teaches that the electric current of the

fuel cell is reduced when the water content is too low, which is the opposite of the claimed configuration. As such, the claims are distinguished over the prior art.

Dependent claims 8 and 18 recite a memory means having stored therein a plurality of moisture characteristics which relate the electric current to the electric power of the fuel cell, and wherein the control means reads out from the memory means a current or power value based on the results from the moisture diagnosis means. Neither JP '053 nor JP '211 teaches or fairly suggests this subject matter.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1745
June 18, 2007